OIAD Working Paper 2021-01

Jargon in Fund Fee Disclosures

Alycia Chin, Office of the Investor Advocate, U.S. Securities and Exchange Commission, 100 F St., NE, Washington, DC 20549, readlinga@sec.gov, ORCID: 0000-0002-9570-0549.

Brian Scholl, Office of the Investor Advocate, U.S. Securities and Exchange Commission, 100 F St., NE, Washington, DC 20549, schollb@sec.gov.

Eric VanEpps, David Eccles School of Business, University of Utah, 1655 Campus Center Dr., Salt Lake City, UT 84112, eric.vanepps@eccles.utah.edu.[1]

† The U.S. Securities and Exchange Commission ("SEC" or "Commission") disclaims responsibility for any private publication or statement of any Commission employee or Commissioner. The Commission has expressed no view regarding the data, analyses, findings, and conclusions contained in this publication, which does not necessarily reflect the views of the Commission, the Commissioners, or staff of the Commission. This paper is part of a series of papers that the Office of the Investor Advocate is publishing. Papers in this series investigate a broad range of issues relevant to the Commission's mission and are disseminated to stimulate discussion and critical comment. Inclusion of a paper in this series does not indicate a Commission determination to take any particular action.

[1] Eric VanEpps is both a faculty member at the University of Utah and an Intergovernmental Personnel Act Fellow at the U.S. Securities and Exchange Commission.

Acknowledgements

We thank Angela Fontes, Mark Lush, Seth Cohen, and May Zhu for help conducting this research. We also thank Adam Craig and John Foley for comments on this research.

Abstract

The majority of investment accounts in the United States comprise mutual funds or exchange-traded funds ('funds"), making these investment vehicles an important component of household balance sheets. To help investors make decisions about funds, regulations require companies to disclose information about fees and expenses in standardized formats. Despite standardization, these disclosures may be difficult for investors to understand due to, among other things, financial, legal or regulatory jargon (for example, "12b-1 fees"). We ask whether it is possible to improve the language around fund fee disclosures, asking: (1) What terms or phrases do readers perceive as most intuitive for conveying the concepts underlying fund fees? and (2) Does more intuitive labeling improve fee comprehension, as measured by readers' ability to identify the correct definition of those fees? In Study 1 (N = 1606), we recruit investors and non-investors for a "best-least scaling" task, asking them to identify terms that they perceive to reflect given fee definitions "the best" or "least." In Study 2 (N = 1525), we select terms that performed well in Study 1 and test whether participants have higher comprehension rates when viewing new terms relative to existing terms. The results show improvements in comprehension rates ranging from 5.6 to 32.7 percentage points across different definitions. Furthermore, comprehension increases among both sophisticated investors and non-investors. Our results suggest that language in fund disclosures could be modified to improve investors' comprehension of fund fees, and provides a methodology for selecting potential terms.

Keywords: funds, jargon, financial disclosure, comprehension, investments

Introduction

In the United States, more than two thirds of working-age families have retirement plans and 15 percent of households directly own stocks (Board of Governors of the Federal Reserve System, 2020). Households use these investments and investment vehicles to achieve important life outcomes such as saving for education, saving for emergencies, and retiring (Investment Company Institute, 2020, p.145). Regardless of the specific accounts that are held, the majority of investment accounts contain mutual funds or exchange traded funds (hereafter, "ETFs"; Scholl, et al., 2018), making these securities an important component of households' finances. This importance is reflected in the overall size of the fund industry, which grew from $7.0 trillion in 2000 to over $25.6 trillion in 2019 (Investment Company Institute, 2020).

While approximately a third of retail investors rely on financial professionals to help them make investment decisions, about half decide about investments entirely independently and have never used financial advice (Scholl, et al., 2018). To convey information about investments to the public, financial regulations require financial institutions to provide "disclosures," informational documents that include product terms and agreements (Kozup et al., 2012). Arguably, the most important disclosure documents for mutual funds and ETFs are the statutory prospectus and, where applicable, the summary prospectus.

Financial regulations are fairly prescriptive about some aspects of information contained in fund disclosures. One of the areas subject to regulatory requirements is information around fees and expenses,[2] which is important for investors to consider. Under regulations applicable to prospectus documents, fund companies are generally required to disclose information about fees and expenses in a standardized format to help investors compare that information across funds.

[2] *See, e.g.,* Form N-1A (SEC registration form for mutual funds).

Typically, the information appears in two sections in the main disclosures: a fee table that shows shareholder transaction fees and annual fund operating expenses, and an expense example that shows fees that an investor might pay if they invested $10,000 over the next ten years and received a 5% return each year.[3]

Despite these requirements, it is not clear that fund investors are always making optimal investment decisions. While some fees, such as front-end loads paid at the time of purchase, seem to have become incorporated into investors' decisions as attention to them has increased, there has been less investor response to ongoing operating expenses and fees (Barber, Odean, & Zhang, 2005). Furthermore, research shows that higher-IQ investors are more likely to avoid funds with high management fees, even after controlling for many services offered by these funds (Grinblatt et al., 2016), suggesting that some of these fees may either target[4] or be poorly understood by unsophisticated investors who lack financial literacy.[5] Moreover, numerous experimental studies on investment choice problems suggest investors make suboptimal choices and are easily distracted by complications in the choice environment (Beshears et al., 2011; Choi et al., 2010).

While there are myriad barriers to optimal investment decisions, in this paper we focus on one particular source of difficulty: financial jargon. We define jargon as "language used by a particular group of people, especially in their work, and which most other people do not understand" (Cambridge Business English Dictionary, 2020), and note that jargon takes the place

[3] *See id*. at Item 3; *see* also Request for Comment on Fund Retail Investor Experience and Disclosure, Investment Company Act Release No. 33113 (June 5, 2018) [83 FR 26891 (June 11, 2018)] ("Fund Investor Experience RFC") at section II.D.3.

[4] Anagol and Kim (2012), and Duarte and Hastings (2012) look at firm responses in India and Mexico, respectively, suggesting that firms adapted to policy changes to shroud or retarget fees.

[5] Even with the help of investment professionals, there is little evidence to suggest that investors make better investment decisions with professional advice (Bergstresser, Chalmers, & Tufano, 2009, and surveys in Burke et al., 2015; Scholl et al., 2018).

of more easily accessible, substitutable language (Brown, Anicich, & Galinsky, 2020). That is, although technical language may be required in some contexts as the only way to communicate a given piece of information, jargon refers uniquely to terms that are more difficult for laypeople to understand than is strictly necessary. Jargon is an issue across financial reporting contexts; for instance, readers of corporate reports have raised questions about whether linguistic complexity (jargon) is necessary for conveying technical information, or whether it is used by firms to intentionally obscure information (Bushee, Gow, & Taylor, 2018). Given our focus on retail investors, we concentrate on jargon in fund investment disclosures.

Jargon may be a problem in the context of fund investments because disclosures typically are written by experts with significant knowledge of securities regulation, but in many cases are used by individual retail investors who may have significantly less knowledge. Past research has shown a "curse of knowledge" (e.g., Birch et al., 2017; Camerer, Loewenstein, & Weber, 1989) whereby those with knowledge are unable to imagine the perspective of others without such knowledge. When communicating fees or other important elements of funds to non-expert investors, then, experts may mistakenly generalize their own feelings of comfort with jargon to assume that jargon is more accessible and easily understood than it actually is. As such, they may fail to fully appreciate the difficulty these terms create. Testing terms with laypeople and individual retail investors—including those who lack expertise—may be necessary to uncover gaps in understanding and to develop language that can be meaningfully used by all.

Financial jargon and comprehension

It is widely believed that disclosures should be made clear and easy for readers to process. For example, in an order from the Office of Management and Budget, executive

agencies and regulators were encouraged to use plain language, with explicit mention that "Summary disclosure should also avoid jargon, technical language, or extraneous information" (Sunstein, 2010, p. 4). For securities disclosure in particular, the SEC has adopted rules and amendments to encourage plain language writing, requiring issuers to use plain English principles in prospectuses (Plain English Disclosure, 1998), and requiring the presentation of streamlined, summarized information in prospectuses (Enhanced Disclosure, 2009).[6]

Plain English guidelines have improved the readability of disclosures, as demonstrated by a textual analysis of disclosures from 1994 to 2009 which found that firms simplified the language in their disclosures (Loughran & McDonald, 2014). Yet, a recent analysis on the readability of fund summary prospectuses finds that in 2018, nearly 40 percent of these documents continue to require advanced college or post-college reading ability (Scholl, Silverman, & Enriquez 2020). This requisite level of reading ability suggests severe obstacles for the approximately two-thirds of Americans who do not have a college degree, and 43 million American adults who have trouble with simple literacy tasks like comparing and contrasting information (Mamedova & Pawlowski, 2019). Recognizing the continued difficulty that some investors may experience when reading disclosures, a recent SEC proposal discusses potential changes in terminology regarding fund fees and requests feedback on certain proposed required language.[7]

Given the importance of fund fees discussed above, and interest in increasing the accessibility of fund disclosures through reduced jargon, we ask:

---

[6] *See* Fund Investor Experience RFC at section II.C.1; rule 421 under the Securities Act of 1933.

[7] *See* Tailored Shareholder Reports, Treatment of Annual Prospectus Updates for Existing Investors, and Improved Fee and Risk Disclosure for Mutual Funds and Exchange-Traded Funds; Fee Information in Investment Company Advertisements, Investment Company Act Release No. 33-10814 (November 5, 2020) [85 FR 70716 (November 5, 2020)] at section F.

RQ1: What terms or phrases do readers perceive as most intuitive for conveying definitions of fees in fund disclosures?

One concern when considering alternative terminology for conveying fund fees is that changes to disclosures could interfere with existing market knowledge. In particular, if readers are familiar with existing terminology, there could be confusion when they are faced with less familiar terms. Indeed, Ben-Shahar and Schneider (2011) argue that securities disclosures are primarily intended for sophisticated participants. It may be the case that sophisticated participants do not suffer from lower comprehension rates on jargon-laden terms, or even that they are familiar enough with technical language that they perceive it as more intuitive than new language that is easier for others to read. To address this issue, we explore potential heterogeneity in understanding among people who vary in their investment experience and technical knowledge, asking:

RQ2: Do respondents with different levels of investment experience have different perceptions of the fund terms or phrases that are most intuitive?

Finally, despite our attempts to develop alternative terms that better communicate the definitions of fund fees, it is possible that existing terms might actually perform better. Therefore, an important test of our proposed terms is to determine whether a reader who views a given mutual fund term in isolation can correctly identify the associated concept. In other words, if fund disclosures were to be revised to incorporate our alternative terminology in a fee table,

would the new terms more clearly convey the intended information to readers than the terms that are typically displayed in current disclosures? Throughout the research, we focus on this type of "comprehension" – of definitions of fund terms – and acknowledge that we do not address other important aspects of applying this knowledge, such as an investor's ability to use a fee table to calculate the fees that they would be likely to pay over their investment horizon. To understand whether comprehension varies between existing and alternative terminology, as well as between different types of respondents, we ask:

RQ3: Which terms and phrases are best comprehended by readers, as measured by their ability to identify the correct fund fee definition for a given term?

RQ4: Does comprehension of terms or phrases differ across those with different levels of investment experience?

The current research

The primary goals of this research are to identify jargon surrounding fund fees and expenses, and to determine whether this jargon can be simplified to improve consumers' comprehension. In Study 1, we present participants with existing fund fee terminology and new terms that we generated, examining which terms are perceived as most intuitive for conveying definitions of fund fees. In Study 2, we test the best-performing terms from Study 1 to determine whether these new terms are easier to comprehend than the terms that currently exist in the market. Study 2 is effectively a "back-translation" exercise to determine if the terms identified in Study 1 result in a better match of terms and fee concepts.

Study 1

Method

Sample. This study and all subsequent studies were approved by the Institutional Review Board at NORC. We recruited 1606 U.S. residents online using Dynata. Specifically, we used a quota sampling approach aiming to recruit participants with different levels of investment experience who might have different perspectives on the use of jargon. In particular, we targeted recruitment of 525 non-investors, 525 investors who had an retirement account and no other accounts ("retirement-only investors"), and 525 investors who had an independent retirement account such as a brokerage account ("independent investors") (see Screening below). We constructed these subgroups with the expectation that independent investors would have the highest levels of investment sophistication and experience with regard to funds. Additionally, we expected that non-investors would have lower levels of investment knowledge and experience than retirement-only investors. Ultimately, due to difficulties recruiting independent investors, we ended up with a slightly smaller sample of these participants (see Table 1), which we offset by recruiting a larger number of retirement-only investors.

As shown in Table 1, there were differences between the subgroups; non-investors were younger ($F(2, 1603) = 4.004$, $p < .01$), had lower household income ($\chi2(10) = 370.48$, $p < .001$) and educational attainment ($\chi2(8) = 210.74$, $p < .001$) on average than members of the other two groups. In addition, investors were more likely to be married ($\chi2(8) = 43.75$; $p < .001$), men ($\chi2(4) = 62.57$; $p < .001$), and non-Hispanic White ($\chi2(2) = 19.17$; $p < .001$).

Table 1. Study 1 sample characteristics.

		Subgroups		
	Full Sample	**Non-Investor**	**Retirement Only Investor**	**Independent Investor**
Scholl-Fontes Mutual Fund Literacy (0-11)				
Mean (SD)	4.89 (2.91)	3.61 (2.69)	4.87 (2.72)	6.27 (2.72)
Lusardi-Mitchell Financial Literacy (0-3)				
Mean (SD)	2.01 (1.05)	1.52 (1.07)	2.17 (0.95)	2.36 (0.93)
Age				
Mean (SD)	57.98 (14.16)	56.86 (15.09)	57.82 (12.83)	59.35 (14.57)
Annual Household Income (%)				
$0-50,000	36.18	65.46	26.36	16.80
$50,001-100,000	33.50	25.00	40.82	33.81
$100,001-150,000	17.81	7.06	21.77	24.49
$150,001-200,000	7.85	1.53	7.65	14.78
$200,001-250,000	2.05	.00	1.70	4.66
$250,001 or more	2.62	.95	1.70	5.47
Education (%)				
High school diploma or less	16.44	31.30	10.71	7.49
Associate's degree	10.65	11.07	12.59	7.89
Some college, no degree	18.68	22.90	19.73	12.96
Bachelor's degree	31.88	24.62	34.52	36.44
Graduate school (JD, PhD, MD, etc.)	22.35	10.11	22.45	35.22
Race/Ethnicity (%)				
Hispanic	5.35	6.11	5.44	4.45
Non-Hispanic White	86.11	80.92	87.41	90.08
Non-Hispanic Black or African American	6.91	12.40	5.61	2.63
Non-Hispanic American Indian or Alaska Native	1.06	1.15	1.02	1.01
Non-Hispanic Asian	5.04	4.58	4.59	6.07
Non-Hispanic Native Hawaiian or Pacific Islander	.44	.38	.17	.81
Marital Status (%)				
Married	54.48	45.61	54.93	63.36
Single	19.49	24.05	17.35	17.21
Separated	1.18	1.15	2.04	.20

		Subgroups		
	Full Sample	**Non-Investor**	**Retirement Only Investor**	**Independent Investor**
Divorced	16.25	18.51	17.86	11.94
Widowed/widower	8.09	10.31	7.31	6.68
Prefer not to say	.50	.38	.51	.61
Gender (%)				
Male	46.14	37.60	41.67	60.53
Female	53.67	62.02	58.16	39.47
Prefer not to say	.19	.38	.17	.00
Total Count	1606	524	588	494

Screening. To establish study eligibility, participants were asked questions about decision-making in their household. Specifically, they were first asked about their marital and partnership status. Next, they were asked "In your household, who makes most of the decisions about financial products you would use for investing, like mutual funds or retirement accounts?"[8] Those who indicated that someone else makes most or all of the decisions were screened out.

To determine whether a participant was a non-investor, retirement-only investor, or independent investor, we used four questions reproduced in Appendix A. Participants who had an employer-sponsored retirement plan but did not get to make any decisions about the investments in the plan (as in the case of most pensions), as well as participants who reported no investments, were classified as non-investors. Anyone who indicated that they "get to choose how the money is invested" in any of their employer-sponsored retirement plans, as well as anyone that had retirement accounts outside of an employer-sponsored plan (e.g., an individual retirement account), but who had no other stock, bond, mutual fund or ETF investments outside of a retirement account, were classified as a "retirement-only" investor. Finally, anyone who

[8] This question was shown on the same page as another one asking about who makes decisions about "everyday financial tasks," which was not used in screening.

reported having investments in stocks, bonds, mutual funds, or other securities outside of a retirement account (e.g. in a brokerage account, or in actual stock certificates) was considered an "independent" investor. Note that this last group includes respondents who have a retirement investment account (61.3% with decision-making ability, and 15.8% with no decisions), as well as those who do not (19.8%).[9] These classifications are imperfect proxies of investment experience, but we believe this classification helps to contextualize subjects' level of investing experience and fund knowledge.

Selection of best fitting and least fitting terms. To identify which terms were perceived as fitting fund definitions, participants next completed best-least scaling tasks. Best-least scaling is considered an appropriate measurement tool when trying to examine how items map to an underlying continuum (Finn & Louviere, 1992), in this case, the extent to which terms convey a certain definition.

For our best-least scaling tasks, we chose to study six fund fees that are common in the industry: 12b-1 fee, front-end load, redemption fee, back-end load, management fee, and exchange fee.[10] Table 2 shows the definitions and terms used to populate the best-least scaling task. The definitions were developed by the research team using investor resources (e.g., U.S. Department of Labor, 2019) and reviewed by market experts for accuracy.

Each participant completed tasks for three fee definitions, in one of two groups (as shown in Table 2). The first group was assigned definitions for "12b-1 fee," "front-end load," and "redemption fee," in a random order. The second group received definitions for "back-end

[9] A few participants were not sure, or were not sure whether they could make decisions in their account, so values do not sum to 100%.

[10] Note that, in certain cases, we use terms that differ from the legally prescribed terms used in mutual fund registration forms; for instance, a front-end load is known as "Maximum Sales Charge (Load) Imposed on Purchases"; however, all of the existing terms we use are common in the mutual fund industry.

load," "management fee," and "exchange fee," in a random order. These subgroups were assigned to reduce potential interactions in selections across definitions, such as a participant disproportionately selecting "front-end load" after they had seen the option to choose "back-end load."

Table 2. Definition and terms shown to participants in Study 1.

Existing term	Definition	Set of terms	
		Alternatives	**Decoys**
12b-1 fee (Group A)	When you have money invested in a mutual fund, **this fee** is the amount that you will pay each year for commissions to brokers and other salespersons, advertising and other costs of promoting the mutual fund. For example, if you have $10,000 in your account and this fee is 5%, then you will be charged $500 this year for owning that mutual fund.	• 12b-1 fee* • Fund's marketing fee† • Fee for advertising • Annual charge for advertising and marketing	• Mutual fund fee • 365(c) fee • Commission • Broker fee
Front-end load (Group A)	**This fee** is a cost for buying mutual fund shares. It is deducted up front, so your initial investment will be lowered. For example, imagine you invest $1,000 and this fee is 5%. Then, you will be charged $50 to buy ($1,000 x .05 = $50) and only have $950 of mutual fund shares.	• Front-end load* • Purchase charge • Upfront commission • Upfront sales charge† • Fee for buying this fund • Deduction from your initial purchase	• 5% fee • Class B fee
Redemption fee (Group A)	**This fee** is a cost for selling mutual fund shares. These fees are often waived after you own a mutual fund for a short time, such as 30 days.	• Redemption fee* • Early exit fee • Short-term fee† • Flipping fee • Back-end load	• Mutual fund shares fee • Quick fee • Fee waiver
Back-end load (Group B)	**This fee** is a cost for selling mutual fund shares. It will reduce your overall profits.	• Back-end load* • Fee for selling this fund† • Reclaim fee	• Initial sales charge • Disclaim fee • 5% fee

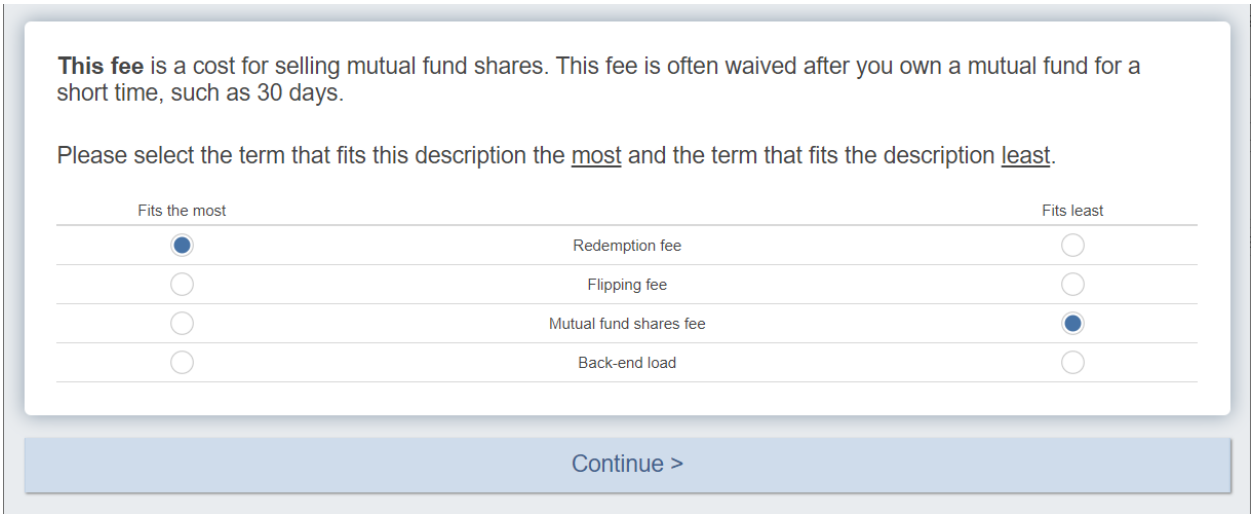
	For example, imagine you invest $1,000 and it grows over time to $10,000. If this fee is 5%, then you will be charged $500 to sell ($10,000 x 0.05 = $500) and have $9,500 remaining.	• Exit charge	• Seller's fee
Management fee (Group B)	**These fees** are used to pay for managing the assets of an investment fund, including administrative expenses. The amount of these fees can vary, depending on the manager and the nature of the investment product. Products that require significant management, research, and monitoring generally will have higher fees.	• Management fee*† • Investment advisory fee* • Account maintenance fee* • Administrative expense fee	• Research fee • Product fee • Labor charge • Asset charge
Exchange fee (Group B)	**This fee** is charged by an investment company if you transfer shares to another fund within the same mutual fund company. For example, if you are currently invested in a stock fund and want to switch it to a bond fund, then you may have to pay this fee.	• Exchange fee* • Transfer fee† • Reassignment fee • Fee for switching funds	• Investment fee • Intra-fund fee • Open exchange charge • Service charge

Note. * designates a term that is currently used by some market participants. † designates the alternative term that performed the best in Study 1.

For each definition, participants were randomly assigned a set of four terms and selected one that "fits the most" and one that "fits least"; they were not allowed to select the same term for both most and least (see Figure 1 for an example). The four terms that were shown were drawn from an underlying set of eight terms (see Table 2); the "decoy" terms were shown to increase the variation in the extent to which terms fits the definition and lower the overall difficulty of the task. Participants repeated this task six times for each fee concept with a random selection of four terms so that each of the eight terms was shown to a given participant exactly three times (i.e. six task draws of four terms). After completing all six trials for a given

definition, participants would move on to the next definition they had been assigned. Thus, in total each participant made 18 "most" and 18 "least" selections in the study. The specific selection and order of terms was predetermined by Sawtooth software, and was designed to ensure that a participant would see each term three times in a balanced order.

Figure 1. Screenshot of best-least scaling task from Study 1.



Subjective and objective fund knowledge. After completing the task, participants reported demographic and psychological characteristics. Subjective knowledge was measured using a series of five items drawn from prior research (Scholl & Fontes, 2020a). Items included, "I am very knowledgeable about mutual funds," and "I understand the fees normally paid for mutual funds." Each item was answered on a 5-point scale ("Strongly disagree" to "Strongly agree") and also allowed participants to indicate "Don't know."

Objective fund knowledge was measured using an 11-item true/false scale drawn from prior research that was designed as a measure of knowledge on technical specifics of mutual funds (Scholl & Fontes, 2020b). We took the total number of correct answers as the measure of

objective fund knowledge; "Don't know" responses were coded as incorrect. We also measured participants' financial literacy using three items drawn from Lusardi and Mitchell (2011). We took the total number of correct answers as the measure of financial literacy (Table 1).

Table 1 shows the average levels of objective knowledge across the three subgroups that we sampled. It shows that independent investors indeed have higher investment sophistication, as reflected in both their Scholl and Fontes (2020b) and Lusardi and Mitchell (2011) scores ($F(2, 1603) = 122.5$, $p < .001$ and $F(2, 1603) = 104.2$, $p < .001$, respectively). In terms of subgroup differences, for instance, the Scholl and Fontes measure shows retirement-only investors having 35% higher average scores than non-investors, and independent investors having 29% higher average scores than retirement-only investors. As such, these measures also suggest varying levels of investment expertise between subgroup members.

Financial background. In addition to the questions used in screening, we asked investors to indicate which types of common investments they currently own, how often they have bought or sold investments in the past twelve months, and how they make investment decisions (e.g., "I let a professional choose investments for me" or "I conduct my own research"). These characteristics were measured to better understand our sample.

Demographic characteristics. We collected marital status, whether the participant lives with a significant other, English language use, age, gender, household income, educational attainment, and race/ethnicity, as shown in Table 1.

Results

What terms or phrases do readers perceive as most intuitive for conveying definitions of fees in fund disclosures? For each definition that was shown, we calculated the

difference between the number of times a participant selected a term as fitting "best" and "least." Although this method does not allow for multivariate analysis, prior research demonstrates that it is a reasonable and intuitive proxy for other methods (see, e.g., Finn & Louviere, 1992; Auger, Devinney & Louviere, 2007). Given that each term was shown to participants three times, the "best-least" scores therefore ranged from -3 to +3 on an individual respondent level.

The average score for each term is shown in Table 3 for the overall sample and each subgroup. Overall, the results show significant variation in perceptions for terminology across the alternative and decoy terms that were presented. For instance, when viewing the definition for front-end load, participants chose the term "Upfront sales charge" as fitting the best overall, while "front-end load" itself was rarely selected as fitting best.

Table 3. Best-Least Scores for Study 1.

	Full Sample		**Non-Investor**		**Retirement Only Investor**		**Independent Investor**	
	M	(SD)	M	(SD)	M	(SD)	M	(SD)
Terms for 12b-1 fee								
Mutual fund fee	1.17	(.06)	0.99	(.10)	1.24	(.10)	1.28	(.09)
Broker fee	1.02	(.06)	0.89	(.10)	1.25	(.10)	0.91	(.11)
Commission	0.60	(.07)	0.60	(.11)	0.63	(.12)	0.58	(.12)
Fund's marketing fee	0.44	(.06)	0.36	(.10)	0.55	(.09)	0.40	(.10)
Annual charge for advertising and marketing	0.11	(.07)	0.25	(.12)	0.20	(.12)	-0.08	(.11)
Fee for advertising	-0.71	(.06)	-0.63	(.10)	-0.67	(.10)	-0.82	(.10)
365(c) fee	-1.32	(.05)	-1.07	(.09)	-1.45	(.09)	-1.44	(.09)
12b-1 fee	-1.40	(.06)	-1.53	(.09)	-1.69	(.09)	-1.00	(.12)
Rank correlation with independent investors			0.98		0.95		N/A	
Terms for front-end load								
Upfront sales charge	0.67	(.06)	0.41	(.09)	0.78	(.10)	0.82	(.10)
5% fee	0.53	(.07)	0.62	(.12)	0.81	(.12)	0.13	(.13)
Fee for buying this fund	0.50	(.06)	0.52	(.10)	0.67	(.11)	0.30	(.10)

	Full Sample		Non-Investor		Retirement Only Investor		Independent Investor	
	M	(SD)	M	(SD)	M	(SD)	M	(SD)
Upfront commission	0.39	(.06)	0.24	(.10)	0.36	(.11)	0.57	(.11)
Purchase charge	0.36	(.06)	0.41	(.10)	0.43	(.10)	0.25	(.10)
Deduction from your initial purchase	-0.11	(.06)	0.22	(.11)	-0.03	(.10)	-0.50	(.11)
Front-end load	-0.24	(.07)	-0.69	(.10)	-0.56	(.11)	0.48	(.13)
Class B fee	-1.85	(.05)	-1.60	(.09)	-2.10	(.08)	-1.86	(.09)
Rank correlation with independent investors			0.24		0.36		N/A	
Terms for redemption fee								
Short-term fee	1.00	(.05)	0.87	(.09)	1.17	(.09)	0.95	(.10)
Redemption fee	0.40	(.06)	0.22	(.11)	0.34	(.12)	0.62	(.11)
Fee waiver	0.38	(.07)	0.63	(.12)	0.44	(.13)	0.08	(.12)
Mutual fund shares fee	0.38	(.07)	0.24	(.12)	0.66	(.12)	0.25	(.11)
Early exit fee	0.32	(.07)	0.31	(.12)	0.16	(.12)	0.48	(.11)
Quick fee	-0.58	(.06)	-0.20	(.10)	-0.62	(.10)	-0.87	(.09)
Flipping fee	-0.89	(.06)	-0.74	(.10)	-0.96	(.10)	-0.97	(.10)
Back-end load	-1.01	(.06)	-1.33	(.09)	-1.27	(.10)	-0.48	(.12)
Rank correlation with independent investors			0.71		0.74		N/A	
Terms for back-end load								
Fee for selling this fund	1.19	(.06)	0.96	(.11)	1.35	(.11)	1.29	(.09)
Seller's fee	1.13	(.06)	0.91	(.10)	1.47	(.09)	1.06	(.09)
5% fee	0.95	(.07)	0.86	(.11)	1.29	(.13)	0.78	(.11)
Exit charge	0.05	(.07)	-0.10	(.11)	-0.16	(.12)	0.33	(.11)
Back-end load	-0.62	(.07)	-1.05	(.10)	-1.08	(.13)	0.07	(.12)
Initial sales charge	-0.76	(.06)	-0.30	(.10)	-0.98	(.12)	-0.99	(.10)
Reclaim fee	-0.88	(.05)	-0.58	(.10)	-0.95	(.10)	-1.08	(.08)
Disclaim fee	-1.16	(.05)	-0.82	(.09)	-1.31	(.09)	-1.33	(.08)
Rank correlation with independent investors			0.86		0.88		N/A	
Terms for management fee								
Management fee	1.51	(.05)	1.17	(.09)	1.63	(.09)	1.70	(.08)
Account maintenance fee	1.20	(.05)	1.01	(.09)	1.43	(.10)	1.20	(.08)
Administrative expense fee	0.96	(.05)	0.73	(.10)	1.24	(.09)	0.95	(.09)
Investment advisory fee	0.60	(.06)	0.31	(.10)	0.30	(.11)	1.05	(.09)
Asset charge	-0.78	(.05)	-0.71	(.09)	-0.79	(.11)	-0.84	(.08)
Product fee	-0.94	(.05)	-0.70	(.10)	-1.05	(.10)	-1.06	(.08)

	Full Sample		Non-Investor		Retirement Only Investor		Independent Investor	
	M	(SD)	M	(SD)	M	(SD)	M	(SD)
Research fee	-1.01	(.05)	-0.75	(.09)	-1.26	(.09)	-1.07	(.08)
Labor charge	-1.64	(.05)	-1.17	(.10)	-1.84	(.08)	-1.87	(.08)
Rank correlation with independent investors			0.95		0.98		N/A	
Terms for exchange fee								
Transfer fee	1.30	(.05)	1.01	(.09)	1.53	(.09)	1.37	(.09)
Fee for switching funds	0.76	(.07)	0.63	(.11)	0.85	(.12)	0.82	(.11)
Exchange fee	0.65	(.06)	0.35	(.10)	0.65	(.11)	0.90	(.09)
Reassignment fee	-0.13	(.06)	0.01	(.11)	-0.20	(.11)	-0.20	(.10)
Intra-fund fee	-0.37	(.07)	-0.51	(.11)	-0.26	(.13)	-0.31	(.11)
Service charge	-0.62	(.06)	-0.43	(.11)	-0.69	(.12)	-0.73	(.10)
Open exchange charge	-0.85	(.06)	-0.53	(.12)	-1.07	(.11)	-0.94	(.10)
Investment fee	-0.85	(.06)	-0.59	(.10)	-0.96	(.10)	-0.99	(.09)
Rank correlation with independent investors			0.95		0.95		N/A	

Note. Table shows average best-least scores and corresponding standard deviations for the entire sample and each subgroup. The terms 12b-1 fee, front-end load, and redemption fee were shown to participants in Group A, and the other three terms were shown to participants in Group B.

Do respondents with different levels of investment experience have different perceptions of the fund terms or phrases that are most intuitive? Table 3 shows the best-least scores for each investor type, as well as the rank correlation with independent investors' rankings. There is a tendency for independent investors to perceive existing terms as more intuitive relative to participants from other groups; for instance, their average rating for "front-end load" is +0.48 as opposed to -0.56 or lower for the other sugroups. Despite these differences, the larger pattern shown in Table 3 is consistency between the groups, as the most intuitive term is the same across the groups for all six definitions. In addition, the rank correlations with independent investors' ratings are always positive, and in some cases are as high as .98 (Table 3).

Discussion

This study demonstrated variation in the terms that people perceived as intuitive for definitions of common fund terms. In some cases, commonly used terms were rarely selected in the sample overall and were often perceived as the worst match among available terms (e.g., 12b-1 fee and back-end load among non-investors); however, there were also cases where they were selected frequently by participants (e.g., management fee). The results of this study also demonstrated that different types of individuals had different perceptions toward fund terminology, with sophisticated investors perceiving existing terminology as more intuitive. Overall though, there was consistency between all of the subgroups on terms that were seen as most intuitive.

This study was designed to elicit perceptions of potential fund terminology when faced with definitions of fees. However, given that the ultimate goal is for these terms to be used to communicate information, a necessary research question is whether terms convey the correct definitions when presented in isolation. Study 2 examines this issue.

Study 2

Method

Sample and Screening. We drew respondents from Dynata using the same quotas and screening procedures as in Study 1, while excluding anyone who had participated in Study 1. The characteristics of the sample are shown in Table 4. This table shows that, consistent with Study 1, there were differences between the subgroups on many demographic dimensions. Non-investors tend to have lower income ($\chi 2(10) = 317.96$, $p < .001$) and educational attainment

($\chi2(8) = 189.60$, $p < .001$), and are less likely to be married than investors from the other two groups ($\chi2(10) = 53.22$, $p < .001$). They are also less likely to be male ($\chi2(4) = 33.76$, $p < .001$) or non-Hispanic White ($\chi2(2) = 7.06$, $p = .02$). As in Study 1, the independent investors we sample have the highest levels of fund and financial literacy, followed by retirement-only investors and then non-investors ($F(2, 1572) = 206.50$, $p < .001$ and $F(2, 1572) = 146.40$, $p < .001$). In this sample, the majority of independent investors reported having retirement accounts (42.9% with decision-making ability and 20.2% without), while 37.0% did not.

Table 4. Study 2 sample characteristics.

	Full Sample	Non-Investor	Retirement Only Investor	Independent Investor
Scholl-Fontes Mutual Fund Literacy (0-11)				
Mean (SD)	5.02 (3.06)	3.18 (2.78)	5.33 (2.83)	6.55 (2.54)
Lusardi-Mitchell Financial Literacy (0-3)				
Mean (SD)	2.29 (.95)	1.77 (1.08)	2.46 (.81)	2.63 (.68)
Age				
Mean (SD)	70.00 (8.26)	69.78 (8.14)	69.26 (7.66)	70.96 (8.85)
Annual Household Income (%)				
$0-50,000	41.40	69.33	34.67	20.19
$50,001-100,000	35.37	22.86	43.43	39.81
$100,001-150,000	14.67	5.33	14.10	24.57
$150,001-200,000	5.33	1.71	5.52	8.76
$200,001-250,000	1.59	.38	1.33	3.05
$250,001 or more	1.59	.38	.95	3.43
Refused	.06	.00	.00	.19
Education (%)				
High school diploma or less	17.71	32.57	14.29	6.29
Associate's degree	9.84	12.00	9.33	8.19
Some college, no degree	20.57	23.81	20.57	17.33
Bachelor's degree	29.14	19.43	29.52	38.48

	Full Sample	Non-Investor	Retirement Only Investor	Independent Investor
Graduate school (JD, PhD, MD, etc.)	22.73	12.19	26.29	29.71
Race/Ethnicity (%)				
Hispanic	1.08	1.33	.57	1.33
Non-Hispanic White	94.10	92.00	94.48	95.81
Non-Hispanic Black or African American	2.29	4.57	1.71	.57
Non-Hispanic American Indian or Alaska Native	.95	1.33	.95	.57
Non-Hispanic Asian	2.16	1.71	2.10	2.67
Non-Hispanic Native Hawaiian or Pacific Islander	.06	.00	.19	0.00
Marital Status (%)				
Married	52.83	41.14	59.05	58.29
Single	11.75	13.33	11.05	10.86
Separated	.63	1.14	.19	.57
Divorced	17.33	20.76	17.33	13.90
Widowed/widower	16.95	23.05	11.81	16.00
Prefer not to say	.51	.57	.57	.38
Gender (%)				
Male	50.10	40.76	51.43	58.10
Female	49.84	59.05	48.57	41.90
Prefer not to say	.06	.19	0.00	0.00
N	1525	525	525	525

Comprehension of fund terminology. Over multiple trials, participants were asked to pick a definition that best fits a given fund term. The list of terms included ten terms that were drawn from Study 1, including five original and five alternative terms from that study (see Table 2 for terms). The term "management fee" was omitted because it did not yield a superior alternative in Study 1. We added the term "custodial fee," which did not appear in Study 1, to increase the difficulty of the task.

For each term that was shown, participants selected one of five fund definitions, again from Study 1 (Table 1)[11], "none of these definitions fit," or "I don't know." To emphasize that it could be possible to choose certain terms more than once, participants started this task with an example in which they classified four activities (soccer, monopoly, tennis, and hockey) as a sport, board game, card game, or "none of these definitions fit." For example, they were asked "Which of the following definitions best fits this term? Soccer," and were asked to choose between "A sport, where the goal is to score points by putting an object into a net [correct]," "A board game, where the goal is to have as much money as possible," "A card game, where the goal is to have no cards in your hand," "None of these definitions fit," and "I don't know." During this instructions stage, participants who chose incorrectly would be prompted to try a second time. Those who answered incorrectly twice were shown the correct answer and could continue the study.

Subjective and objective fund knowledge, financial background, and demographic characteristics. After completing the task, participants reported the same background characteristics as in Study 1. We also asked them whether they looked up any answers to questions in this study (yes, many/yes, a few/no), finding that only 3.24% of participants reported doing so. To the extent that participants were able to look up answers for existing (but not new) jargon, we would expect higher levels of comprehension for existing terms.

Results

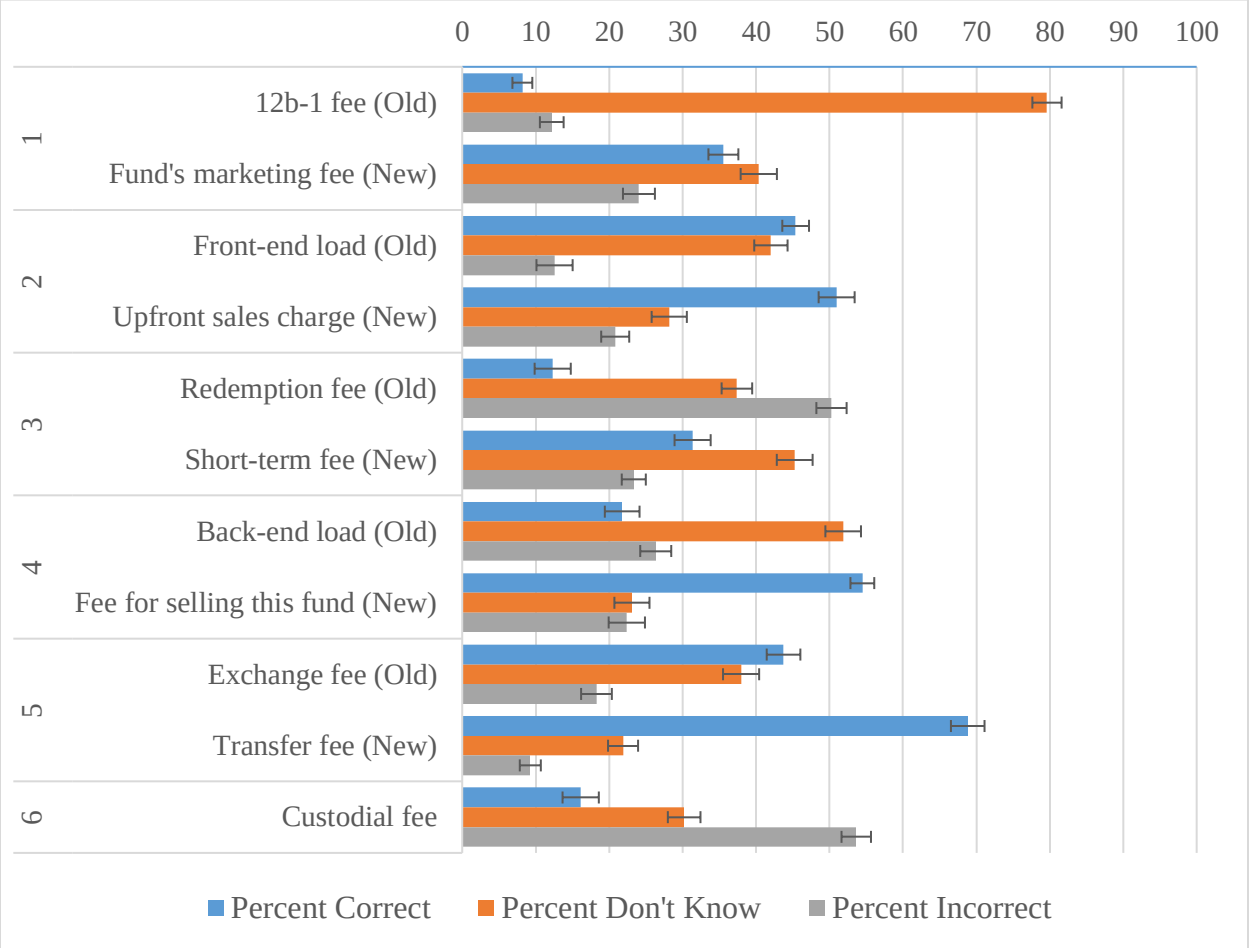
Which terms and phrases are best comprehended by readers, as measured by their ability to identify the correct fund fee definition for a given term?

[11] However, in cases where calculations were shown in Table 1, the calculation text was omitted in Study 2. These omissions were implemented to ensure that the definitions could all show on one screen.

We calculated the proportion of respondents selecting the correct and incorrect definitions for each of the old and new terms, as well as the proportion who explicitly chose "I don't know" (Figure 2; see Appendix B for values). The results show that, across every one of the five pairs of terms that were studied, the new term increased the proportion of respondents who selected the correct response; paired t-tests showed that each increase was significant (*t*s ranging from -4.27 to -22.74, *p*s < .001; see Appendix C for exact values). Across the five pairs, the magnitude of the difference varied, with "back-end load" experiencing the largest 32.7 percentage point improvement, and "front-end load" experiencing the smallest improvement, at 5.6 percentage points. Figure 2 additionally shows that while the increase in comprehension was consistent across the five term pairs, the other responses varied. Some terms showed a decrease in the proportion of respondents saying "I don't know," while others showed a decrease the proportion of incorrect responses.

When calculated on an individual respondent level, as opposed to a term level, average rates of correct identification also increased. Under the old terms, respondents answered 1.31 questions out of five correctly on average (*SD* = 1.28), whereas under the new terms, they answered 2.41 questions correctly (*SD* = 1.61; $t = 32.79$, $p < .001$).

Figure 1. Distribution of Results on Mutual Fund Fee Terms (Study 2).



Note. Error bars show 95% confidence intervals on each proportion.

Does comprehension of terms or phrases differ across those with different levels of investment experience? Next we explored differences in comprehension between our three subgroups: non-investors, retirement-only investors, and independent investors. Table 5 shows that, consistent with their higher investing experience and knowledge, independent investors had the highest comprehension rates across all terms (for old terms, independent investors M = 1.83, SD = 1.37; retirement-only investors M = 1.34, SD = 1.24; non-investors M = .78, SD = .98). Interestingly, these higher comprehension levels were maintained for both existing terms and

new terms, suggesting that a switch to new, intuitive mutual fund fee language did not interfere with experienced investors' ability to identify different mutual fund fees (for new terms, independent investors $M = 2.94$, $SD = 1.48$; retirement-only investors $M = 2.49$, $SD = 1.53$; non-investors $M = 1.80$, $SD = 1.59$; all ts > 18.33, ps < .001).

When comparing across the terms in each term pair, Table 5 shows that respondents in every group had higher comprehension rates when viewing new versus old terms. The magnitude of these changes was not consistent across the subgroups, however. For example, when viewing "transfer fee" versus "exchange fee," retirement-only investors had the largest increase in comprehension relative to the other two subgroups. In contrast, when viewing "upfront sales charge" versus "front-end load," they had the smallest improvement.

Table 5. Rates of correct identification and improvements, by subgroup (Study 2).

		Non-investors		Retirement-only investors		Independent investors	
	Term	**% correct**	**Diff. (ppt.)**	**% correct**	**Diff. (ppt.)**	**% correct**	**Diff. (ppt.)**
1	12b-1 fee (old)	3.62		6.48		14.48	
	Fund's marketing fee (new)	22.86	+19.24	36.38	+29.90	47.43	+32.95
2	Front-end load (old)	25.14		49.33		61.71	
	Upfront sales charge (new)	33.52	+8.38	52.76	+3.43	66.67	+4.96
3	Redemption fee (old)	7.81		12.19		16.95	
	Short-term fee (new)	23.81	+16.00	33.14	+20.95	37.14	+20.19
4	Back-end load (old)	8.57		21.33		35.43	
	Fee for selling this fund (new)	42.1	+33.53	54.48	+33.15	66.86	+31.43
5	Exchange fee (old)	32.38		44.57		54.29	
	Transfer fee (new)	57.52	+25.14	72.57	+28.00	76.38	+22.09
6	Custodial fee	12.38		14.86		21.14	

Note. Table shows the proportion of respondents in each of the three subgroups who comprehended the term. The "diff. (ppt.)" columns show differences in comprehension rates for

each term pair, in percentage points. Positive values indicate an improvement in comprehension for the new term, relative to the old term in each term pair.

Discussion

Overall, this study confirmed that the fund terminology that was perceived as more intuitive by participants in Study 1 was, in fact, easier to comprehend in a separate set of respondents with varying levels of investment expertise. Across each of the pairs of terms that were shown, investors and non-investors were able to identify the definitions of the associated fund fee concept at higher rates when shown new mutual fund terms, as compared to existing fund terms. While all groups benefitted from this new language, there was variation in whether it was experienced investors, or less experienced investors, who benefitted most. Given the inconsistencies in the patterns of relative benefit, it is not the case that the new fund language can necessarily close the gap between non-investors and experienced, independent investors – instead, it may raise comprehension across the board.

General Discussion

Mutual funds and ETFs are important components of investment portfolios in the United States, as reflected in the proportion of investors that hold funds (Scholl, et al., 2018) and the growing size of the fund industry (Investment Company Institute, 2020). Given this importance, it is worthwhile to ensure that investors can understand the information they receive about fund fees. In this research, we concentrated on the potential problem of jargon for fund fees, asking whether it was possible to improve the language in fund disclosures.

Our first study tested new terms and phrases for six common fund fees: 12b-1 fee, front-end load, redemption fee, back-end load, management fee, and exchange fee. Using a best-least

scaling approach, which helps reveal perceptions in cases where respondents might have difficulty making fine-grained ratings (Finn & Louviere, 1992), we found that there was variation in perceptions of the new terms that we generated to convey definitions of fund fees. Despite a tendency for relatively sophisticated, independent investors to perceive existing terms as fitting better, the results also showed a high degree of consistency across perceptions from members of each of the investor groups. To our knowledge, best-least scaling has not previously been used for this kind of policymaking task; instead, it is typically applied when asking consumers to make tradeoffs between different policy areas (e.g., Finn & Louviere, 1992). One advantage of this kind of testing is that it relieves the burden from policymaking teams of intuiting the "best" language that people will understand – a challenge that may be particularly difficult if experts are trying to imagine themselves as less knowledgeable, non-expert readers (e.g., Camerer, Loewenstein, & Weber, 1989; Birch et al., 2017).

Using the results from Study 1, we turned to our research questions on whether comprehension of terms would improve under "new" versus "old" jargon. Across every term that we tested, we found improvements in comprehension rates when using new terms. Ruling out concerns that changes to jargon could interfere with existing market knowledge, we found that members of all three investor subgroups (non-investors, retirement-only investors, and independent investors) had higher comprehension when seeing new terms. Indeed, in some cases it was the experienced, independent investors who showed the largest comprehension gains relative to members of the other groups. These results may assuage concerns that changes to fund disclosures along the lines suggested by this research could harm existing investors.

Limitations and Extensions

Research on financial disclosures is often criticized on the grounds that it occurs "in the lab," rather than in the field – leaving policymakers without knowledge of how financial institutions will respond to disclosure changes (Loewenstein, Sunstein, & Golman, 2014), and whether consumers will pay attention to the information that is disclosed (c.f., Chin & Beckett, 2019). As with prior disclosure research that occurs in the lab, however, we believe it is imperative to test proposed disclosure changes before making changes that could disadvantage ordinary investors. Furthermore, the finding from Study 2 that participants either guessed incorrectly or expressed that they did not know what the majority of the old terms meant, even though the correct definition was included as an answer choice (something that does not exist on real world disclosure forms), suggests that baseline comprehension of prior terms was quite low. To the extent that disclosures should be clear and that fees should be understandable, the present research serves as a necessary first step to facilitate informed decision-making, but it addresses only one issue that may harm investor decision-making.

Conclusion

This research demonstrates that modifying the language in fund fee disclosures can improve investors' and non-investors' comprehension of the concepts underlying fund fees. Across every term that we tested, there were improvements in comprehension using alternative terminology. Beyond the specific language changes that we recommend, our findings point to the potential benefits of quantitative testing in policymaking. As such, our research contributes to growing efforts among researchers and policymakers to improve disclosures and make them

more effective (Chin & Bruine de Bruin, 2019; Johnson & Leary, 2017; Lacko & Pappalardo, 2010). Such work is essential for maximizing the benefits of mandated disclosures.

References

Anagol, S., & Kim, H. H. (2012). The Impact of Shrouded Fees: Evidence from a Natural Experiment in the Indian Mutual Funds Market. *American Economic Review, 102*(1): 576-93.

Auger, P., Devinney, T. M., & Louviere, J. J. (2007). Using Best-Worst Scaling Methodology to Investigate Consumer Ethical Beliefs across Countries. *Journal of Business Ethics, 70*(3): 299-326.

Barber, B. M., Odean, T., & Zheng, L. (2005). Out of Sight, Out of Mind: The Effects of Expenses on Mutual Fund Flows. *The Journal of Business, 78*(6): 2095-2120.

Ben-Shahar, O., & Schneider, C. E. (2011). The Failure of Mandated Disclosure. *University of Pennsylvania Law Review, 159*: 647-749.

Bergstresser, D., Chalmers, J. M. R., & Tufano, P. (2009). Assessing the Costs and Benefits of Brokers in the Mutual Fund Industry. *The Review of Financial Studies, 22*(10): 4129-56.

Birch, S. A., Brosseau-Liard, P. E., Haddock, T., & Ghrear, S. E. (2017). A 'Curse of Knowledge' in the Absence of Knowledge? People Misattribute Fluency When Judging How Common Knowledge is Among Their Peers. *Cognition, 166*: 447-458.

Board of Governors of the Federal Reserve System. (2020). Changes in U.S. Family Finances from 2016 to 2019: Evidence from the Survey of Consumer Finances. *Federal Reserve Bulletin, 106*(5): 1-42. Available at: https://www.federalreserve.gov/publications/files/scf20.pdf

Brown, Z. C., Anicich, E. M., & Galinsky, A. D. (2020). Compensatory Conspicuous Communication: Low Status Increases Jargon Use. *Organizational Behavior and Human Decision Processes, 161*: 274-290.

Bushee, B. J., Gow, I. D., & Taylor, D. J. (2018). Linguistic Complexity in Firm Disclosures: Obfuscation or Information?. *Journal of Accounting Research, 56*(1): 85-121.

Camerer, C., Loewenstein, G., & Weber, M. (1989). The Curse of Knowledge in Economic Settings: An Experimental Analysis. *Journal of Political Economy, 97*(5): 1232-1254.

Chin, A., & Beckett, D. H. (2019). Don't Watch Me Read: How Mere Presence and Mandatory Waiting Periods Affect Consumer Attention to Disclosures. *Behavioural Public Policy,* 1-20.

Chin, A., & Bruine de Bruin, W. (2019). Helping Consumers to Evaluate Annual Percentage Rates (APR) on Credit Cards. *Journal of Experimental Psychology: Applied, 25*(1): 77-87.

Duarte, F., & Hastings, J. S. (2013). Fettered Consumers and Sophisticated Firms: Evidence from Mexico's Privatized Social Security Market. *NBER Working Paper no. 18582.* Available at: https://www.nber.org/papers/w18582

Enhanced Disclosure and New Prospectus Delivery Option for Registered Open-End Management Investment Companies, 17 CFR Parts 230, 232, 239, and 274 (2009).

Finn, A., & Louviere, J. J. (1992). Determining the Appropriate Response to Evidence of Public Concerns: The Case of Food Safety. *Journal of Public Policy & Marketing, 11*(1): 12-25.

Grinblatt, M., Ikäheimo, S., Keloharju, M., & Knüpfer, S. (2016). IQ and Mutual Fund Choice. *Management Science, 62*(4): 924-944.

Investment Company Institute. (2020). *Investment Company Fact Book: A Review of Trends and Activities in the Investment Company Industry*. Available at: https://ici.org/pdf/2020_factbook.pdf

Johnson, H., & Leary, J. (2017). Research Priorities on Disclosure at the Consumer Financial Protection Bureau. *Journal of Public Policy & Marketing, 36*(1): 184-191.

Kozup, J., Taylor, C. R., Capella, M. L., & Kees, J. (2012). Sound Disclosures: Assessing When a Disclosure is Worthwhile. *Journal of Public Policy & Marketing, 31*(2): 313-322.

Lacko, J. M., & Pappalardo, J. K. (2010). The Failure and Promise of Mandated Consumer Mortgage Disclosures: Evidence from Qualitative Interviews and a Controlled Experiment with Mortgage Borrowers. *The American Economic Review, 100*, 516-521.

Loewenstein, G., Sunstein, C. R., & Golman, R. (2014). Disclosure: Psychology Changes Everything. *Annual Review of Economics, 6*, 391-419.

Lusardi, A., & Mitchell, O. S. (2011). Financial Literacy around the World: An Overview. *Journal of Pension Economics and Finance, 10*(4): 497-508.

Mamedova, S., & Pawlowski, E. (2019). *Adult Literacy in the United States*. (U.S. Department of Education NCES 2019-179). Available at: https://nces.ed.gov/datapoints/2019179.asp

Plain English Disclosure, 17 C.F.R Parts 228, 229, 230, 239 and 274 (1998).

Scholl, B., Hung, A. A., Chin, A., Anderson, D. M., Bongard, M., Carman, K., Clancy, N., Dominitz, J., Kelly, T., McKenna, S., Smith, B., Tankard, M., & Steinberg, P. (2018). *The Retail Market for Investment Advice*. (SEC Office of the Investor Advocate). Available at: https://www.sec.gov/files/retail-market-for-investment-advice.pdf

Scholl, B., & Fontes, A. (2020a). Subjective Knowledge and Mutual Fund Literacy. *Unpublished working paper.*

Scholl, B., & Fontes, A. (2020b). Adding Depth to Financial Literacy: Toward a New Index of Mutual Fund Literacy. *Unpublished working paper.*

U.S. Securities and Exchange Commission. (1998). *A Plain English Handbook: How to Create Clear SEC Disclosure Documents.* Available at: http://www.sec.gov/pdf/handbook.pdf

Sunstein, C. R., Office of Management and Budget. (2010). *Disclosure and Simplification as Regulatory Tools*. (Office of Information and Regulatory Affairs). Available at: https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/assets/inforeg/disclosure_principles.pdf

U.S. Department of Labor. (2019). *A Look at 401(k) Plan Fees*. (Employee Benefits Security Administration). Available at: https://www.dol.gov/sites/dolgov/files/ebsa/about-ebsa/our-activities/resource-center/publications/a-look-at-401k-plan-fees.pdf

Appendix A: Screening Questions

1. What is your marital status?
    a. Married
    b. Single
    c. Separated
    d. Divorced
    e. Widowed/widower
    f. Prefer not to say

2. [If Q1 = A, then skip] Do you live with a spouse, partner, or significant other?
    a. Yes
    b. No
    c. Prefer not to say

If Q1 = A OR Q2 = Yes, then MULTIHH = Spouse/Partner Else MULTIHH = Single

3. In your household, who makes most of the decisions about <u>everyday financial tasks</u>, like paying bills?
    a. I am the primary decision maker
    b. I share the responsibilities equally with someone else or multiple people
    c. Someone else makes most of the decisions
    d. Someone else makes all of the decisions

4. In your household, who makes most of the decisions about <u>financial products you would use for investing</u>, like mutual funds or retirement accounts?
    a. I am the primary decision maker
    b. I share decisions equally with someone else or multiple people
    c. Someone else makes most of the decisions [**Terminate**]
    d. Someone else makes all of the decisions [**Terminate**]

[next]

For programming purposes, anyone who makes it to this point should be considered a non-investor by default. This status can be overwritten by questions 6-8.

5. Do you [(If MULTIHH = Married/Partner): or your spouse/partner] have any retirement plans through a current or previous employer, like a pension plan or a 401(k)?
    a. Yes
    b. No
    c. Don't know

6. [If 5 = yes] Are any of these retirement plans the kind where you [(If MULTIHH = Married/Partner): or your spouse/partner] get to choose how the money is invested?
    a. Yes [**Retirement-Only Investor, may be overwritten by Q8**]
    b. No
    c. Don't know

7. Do you [(If MULTIHH = Married/Partner): or your spouse/partner] have any other retirement accounts NOT through an employer, like an IRA, Keogh, SEP, or any other type of retirement account that you have set up for yourself?
    a. Yes [**Retirement-Only Investor, may be overwritten by Q8**]
    b. No
    c. Don't know

8. Not including retirement accounts, do you [(If MULTIHH = Married/Partner): or your spouse/partner] have any investments in stocks, bonds, mutual funds, or other securities?
    a. Yes [**Independent Investor**]
    b. No
    c. Don't know

Appendix B

Table B.1. Response distribution for term comprehension (Study 2).

	Term	Percent Correct	Percent Don't Know	Percent Incorrect
1	12b-1 fee (Old)	8.19	79.62	12.19
	Fund's marketing fee (New)	35.56	40.38	24.06
2	Front-end load (Old)	45.40	42.03	12.57
	Upfront sales charge (New)	50.98	28.19	20.83
3	Redemption fee (Old)	12.32	37.40	50.28
	Short-term fee (New)	31.37	45.27	23.36
4	Back-end load (Old)	21.78	51.87	26.35
	Fee for selling this fund (New)	54.48	23.11	22.41
5	Exchange fee (Old)	43.75	37.97	18.28
	Transfer fee (New)	68.83	21.90	9.27
6	Custodial fee	16.13	30.22	53.65

Note. These values were used to generate Figure 1.

Appendix C

Table C.1. Statistical tests for comprehension improvements in Study 2.

	Estimate	95% CI Lower	95% CI Upper	t-statistic	p-value
12b-1 fee vs. Fund's marketing fee	-0.27	-0.30	-0.25	-21.25	<.001
Front-end load vs. Upfront sales charge	-0.06	-0.08	-0.03	-4.27	<.001
Redemption fee vs. Short-term fee	-0.19	-0.22	-0.16	-13.54	<.001
Back-end load vs. Fee for selling this fund	-0.33	-0.36	-0.30	-22.74	<.001
Exchange fee vs. Transfer fee	-0.25	-0.28	-0.22	-18.14	<.001